REMARKS

In the Final Office Action of April 28, 2008, claims 1, 4, 5 and 8 were rejected under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 6,263,091 ("Jain et al."). In addition, claims 2, 3, 6 and 7 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Jain et al. in view of an NPL document titled "Directional Field Computation for Fingerprints Based on the Principal Component Analysis of Local Gradients" ("Bazen et al.").

In response, Applicants have canceled claims 3 and 7, and amended the independent claims 1 and 5 to more clearly distinguish the claimed invention from the cited references of Jain et al. and Bazen et al. Support for these claim amendments can be found at least in Fig. 3, lines 32-22 on page 3 and lines 1-2 on page 4. As amended, Applicants respectfully assert that the independent claims 1 and 5 are not anticipated by the cited reference of Jain et al. and are also not obvious in view of the cited references of Jain et al. and Bazen et al., as explained below. In view of the claim amendments and the following remarks, Applicants respectfully request that the pending claims 1, 2, 4-6 and 8 be allowed.

A. Patentability of Amended Independent Claims 1 and 5

As amended, the independent claim 1 recites in part "*wherein* A_x, A_y, A_{xy}, A_{yx} *and A are computed using the following equations:*

$$A_x = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k+1,l} \\ (g_y)_{k+1,l} \end{bmatrix} \rangle,$$

$$A_y = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l+1} \\ (g_y)_{k,l+1} \end{bmatrix} \rangle,$$

$$A_{xy} = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k+1,l+1} \\ (g_y)_{k+1,l+1} \end{bmatrix} \rangle,$$

$$A_{yx} = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k+1,l} \\ (g_y)_{k+1,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l+1} \\ (g_y)_{k,l+1} \end{bmatrix} \rangle, \text{ and}$$

$$A = \sum_{k,l=1}^{max} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix} \rangle,$$" which is not disclosed in the cited references of Jain et al. and Bazen et al. Thus, Applicants respectfully assert that the amended independent claim 1 is not anticipated by the cited reference of Jain et al. and is not obvious in view of the cited references of Jain et al. and Bazen et al. As such, Applicants respectfully request that the amended independent claim 1 be allowed.

As correctly stated on pages 3 and 4 of the Office Action, the cited reference of Jain et al. does not disclose that "the mean values are entered in two directional matrices for x and y, in that scalar products are formed of the directional matrices together with the matrices that are displaced horizontally, vertically and in the directions of both diagonals by one region, in that each of the products that were obtained in that way by multiplying the matrices are summed over all the regions of the skin print image, and in that the sums are added together and are divided by the sum of the scalar products of the directional matrices with themselves in order to calculate the quality measure, said sum of the scalar products of the directional matrices with themselves being summed up over all the regions." Thus, the cited reference of Jain et al. does not disclose the above claimed limitations with respect to A_x, A_y, A_{xy}, A_{yx} and A, where A_x, A_y, A_{xy} and A_{yx} are scalar products.

The cited reference of Bazen et al. discloses calculating the coherence of an averaging method using the equation (48) on page 5. However, the cited reference of Bazen et al. does not disclose the above claimed limitations with respect to A_x, A_y, A_{xy}, A_{yx} and A, where A_x, A_y, A_{xy} and A_{yx} are scalar products.

Since the cited reference of Jain et al. and Bazen et al. do not disclose the claim limitations of "*wherein* A_x, A_y, A_{xy}, A_{yx} *and A are computed using the following equations:*

$$A_x = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k+1,l} \\ (g_y)_{k+1,l} \end{bmatrix} \rangle,$$

$$A_y = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l+1} \\ (g_y)_{k,l+1} \end{bmatrix} \rangle ,$$

$$A_{xy} = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k+1,l+1} \\ (g_y)_{k+1,l+1} \end{bmatrix} \rangle,$$

$$A_{yx} = \sum_{k,l=1}^{max-1} \langle \begin{bmatrix} (g_x)_{k+1,l} \\ (g_y)_{k+1,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l+1} \\ (g_y)_{k,l+1} \end{bmatrix} \rangle, \textit{and}$$

$$A = \sum_{k,l=1}^{max} \langle \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix}, \begin{bmatrix} (g_x)_{k,l} \\ (g_y)_{k,l} \end{bmatrix} \rangle,$$

" the amended independent claim 1 is not anticipated by the cited reference of Jain et al. and is also not obvious in view of the cited references of Jain et al. and Bazen et al. As such, Applicants respectfully request that the amended independent claim 1 be allowed.

The above remarks are also applicable to the amended independent claim 5, which recites similar limitations as the amended independent claim 1. Thus, the amended independent claim 5 is also not anticipated by the cited reference of Jain et al. and is not obvious in view of the cited references of Jain et al. and Bazen et al. As such, Applicants respectfully request that the amended independent claim 5 be allowed as well.

B. Patentability of Dependent Claims 2, 4, 6 and 8

Each of the dependent claims 2, 4, 6 and 8 depends on one of the amended independent claims 1 and 5. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicants submit that these dependent claims are allowable for at least the same reasons as their respective base claims.

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

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Date: June 6, 2008

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